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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,611	01/16/2004	Johann Karner	H60-107 DIV	8162

7590 06/15/2005

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EXAMINER

LUND, JEFFRIE ROBERT

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/759,611

Applicant(s)

KARNER ET AL.

Examiner

Jeffrie R. Lund

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/16/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear if the "plasma beam discharge gaps" claimed in claim 4 are part of the "plasma beam discharge configurations" of claim one or if they are an additional plasma source. The Examiner believes that the plasma beam discharge gaps are the plasma beam discharge configurations. If this is not correct, then the "plasma beam discharge gaps" are not supported by the specification and drawings.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 2, and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al, US Patent 5,340,621 in view of Karner et al, US Patent 5,753,045.

Matsumoto et al teaches a vacuum processing apparatus that includes: two plasma discharge configurations that form two plasma beams 7 parallel to each other and in a low-voltage high-current plasma beam discharge gap between a cathode 2 and anode 6; a deposition configuration 11 (substrate) which extend a selected distance from the beam axis along a substantial section of the discharge beam longitudinal direction, a power supply 16 to independently drive each gap; a gas suction configuration; and a gas supply section 26, 27 for supplying a Silicone containing gas. Matsumoto et al also teaches a hot and cold cathode. (Entire document)

Matsumoto et al differs from the present invention in that Matsumoto does not teach gas flow is generally parallel to the discharge axis and that the deposition configuration is between the discharge axes and/or the discharge axes are disposed between two deposition configurations facing one another.

Karner et al teaches the a plasma processing apparatus that has a gas flow parallel to the discharge beam 1 axis A and the discharge axis is disposed between multiple deposition configurations mounted on boat 24 and facing each other. (Entire document, specifically, figures 1, 3, and 3a)

The motivation for replacing the gas supply configuration of Matsumoto et al with the gas supply configuration of Karner et al is to provide an alternate and equivalent means of supplying the reactant gas, to increase the dwell time of the gas in the plasma, and more uniformly coat the substrates.

The motivation for replacing the deposition configuration of Matsumoto et al with the deposition configuration of Karner et al is to provide an alternate and equivalent means of supporting a substrate, and to more increase the throughput of the apparatus by coating multiple substrates at the same time.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the gas supply configuration and deposition configuration of Matsumoto et al with the gas supply configuration and deposition configuration of Karner et al.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al and Karner et al as applied to claims 1, 2, and 4-8 above, and further in view of David, US Patent 6,015,597.

Matsumoto et al and Karner et al differ from the present invention in that they do not teach that the deposition configuration is configured as a powder capture surface.

David teaches a deposition configuration configured as a powder capture surface

7. (Figure 1)

The motivation for replacing the deposition configuration of Matsumoto et al and Karner et al with the deposition configuration of David is to enable the apparatus of Matsumoto et al and Karner et al to produce powder products as taught by David.

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Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the deposition configuration of Matsumoto et al and Karner et al with the deposition configuration of David.

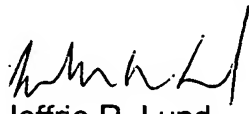
Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art teaches the technological background of the invention.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (571) 272-1437. The examiner can normally be reached on Monday-Thursday (6:30 am-6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jeffrie R. Lund
Primary Examiner